

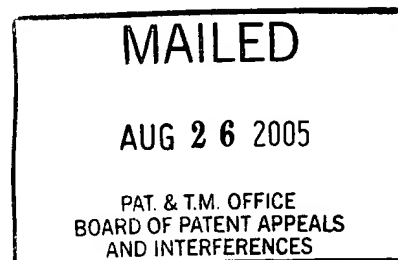
The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HENRY J. PEPIN

Appeal No. 2005-2291
Application No. 09/898,687



ON BRIEF

Before GARRIS, TIMM, and JEFFREY T. SMITH, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal which involves claims 1, 2, 4-18 and 22-24.

The subject matter on appeal relates to an intravascular catheter. With reference to the appellant's drawing, the catheter 10 comprises an elongate shaft 30 having a reinforcement layer 50 disposed between the inner and outer layers. The

reinforcement layer comprises a first wire wound in a first direction and a second highly radiopaque metal wire comprising tungsten wound in a second direction different from the first direction. Further details of this appealed subject matter are set forth in representative independent claim 1 which reads as follows:

1. An intravascular catheter, comprising:

an elongate shaft having a proximal end, a distal end and a lumen extending therethrough, the shaft including an inner layer, an outer layer, and a reinforcement layer disposed therebetween, the reinforcement layer comprising a first wire wound in a first direction and a second highly radiopaque metal wire comprising tungsten wound in a second direction different from the first direction, the first wire interwoven with the second wire, the first wire having a first diameter and the second wire having a second diameter less than the first diameter.

The references set forth below are relied upon by the examiner as evidence of obviousness:

Sater et al. (Sater)	6,068,622	May 30, 2000
Steen et al. (Steen)	6,213,995	Apr. 10, 2001

Claims 1, 2, 4-15 and 22-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Steen, and claims 16-18 are correspondingly rejected over this reference and further in view of Sater.

We refer to the brief and reply brief and to the answer for a complete discussion of the contrary viewpoints expressed by the

appellant and by the examiner concerning the above noted rejections.

OPINION

We will sustain these rejections for the reasons expressed in the answer and below.

Steen discloses a catheter comprising an elongate shaft with a reinforcement layer or braid disposed between the inner and outer layers of the shaft wherein the braid is formed of metal wires wound in different directions (e.g., see Figures 1-2 and the specification disclosure relating to these figures). The aforementioned wires include conductive wires which serve as signal transmitting elements (see the paragraph bridging columns 4-5). According to patentee, these conductive wires are preferably made from copper, copper alloys, aluminum, silver, gold, platinum or rhodium (see lines 14-18 in column 5). When viewing these conductive wires as corresponding to the here claimed second wire, Steen's Figures 1-2 embodiment satisfies all requirements of appealed independent claim 1 except for the requirement that the second wire be a highly radiopaque metal comprising tungsten.

Regarding this claim distinction, it is the examiner's undisputed finding that tungsten was known in the prior art to be

more conductive than platinum which Steen explicitly teaches to be an acceptable metal for his conductive wire.¹ Based on this finding, the examiner concludes that it would have been obvious for one with ordinary skill in this art to replace the platinum conductive wire envisioned by Steen for use in the braid of his catheter with a tungsten conductive wire in order to thereby obtain the conductivity feature desired by patentee via a metal (i.e., tungsten) known to be more conductive than a metal expressly taught by patentee to be suitable for his purpose (i.e., platinum). In light of the superior conductivity of tungsten compared to platinum, the artisan would have had a reasonable expectation of success in replacing the latter with the former. See In re O'Farrell, 853 F.2d 894, 904, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988).

Although the appellant acknowledges that tungsten is more conductive than platinum, he argues that both of these metals are relatively poor conductors. For this reason, it is the appellant's contention that an artisan would not have selected platinum for use as Steen's conductive metal wire notwithstanding patentee's express teaching of using platinum for this purpose.

¹ Indeed, on the record before us, the appellant acknowledges that tungsten is more conductive than platinum. For example, see page 4 of the reply brief.

Similarly, the appellant contends that the artisan also would not have used tungsten as Steen's conductive wire despite its superior conductivity relative to platinum because tungsten is a poor conductor compared to, for example, copper. The appellant's nonobviousness position is not well taken.

The underlying deficiency of the appellant's position is that it presumes an artisan would have used only the most conductive metals for the conductive wires of Steen's catheter. However, the appellant has provided the record before us with no evidence in support of such a presumption. On the other hand, the Steen patent itself provides clear and convincing evidence that patentee's conductive wires may be formed of metals such as copper having relatively high conductivity as well as from metals such as platinum having relatively low conductivity. Stated differently, an artisan would have appreciated from Steen's express teaching that metals having high as well as low conductivities are entirely suitable for use as the conductive wires in Steen's catheter. Furthermore, because patentee expressly teaches platinum as suitable for this use, the artisan would have regarded tungsten as being also suitable in light of its higher conductivity.

The appellant also argues that an artisan would not have used tungsten for the conductive wires of Steen "because tungsten is well-known to be relatively fragile and thus susceptible to breaking" (brief, page 13). Once again, the appellant has failed to provide the record with any evidence in support of this argument. Further, this argument is undermined by the appellant's own specification disclosure which portrays tungsten wire as performing successfully in the environment of a catheter. Viewed from this perspective, the appellant's argument is irrationally based on the proposition that tungsten wire is too fragile for use in Steen's catheter but is not too fragile for use in his claimed and disclosed catheter. These circumstances compel us to regard this argument as unconvincing.

In light of the foregoing and for the reasons expressed in the answer, it is our determination that the examiner has established a prima facie case of obviousness which the appellant has failed to successfully rebut with argument or evidence of nonobviousness. Accordingly, we hereby sustain the examiner's section 103 rejection of claims 1, 2, 4-15 and 22-24 as being unpatentable over Steen as well as the nonargued (see page 15 of the brief) section 103 rejection of dependent claims 16-18 as

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being unpatentable over Steen in view of Sater. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

The decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

Bessley R. Davis

Bradley R. Garris
Administrative Patent Judge

Catherine Ann

Catherine Timm
Administrative Patent Judge

Myra T. Emire

Jeffrey T. Smith
Administrative Patent Judge

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BRG : tdl

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